

REMARKS

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.116, and in light of the remarks which follow, are respectfully requested.

By the present amendments, claims 43, 44, 48 and 49 have been amended in response to issues raised in the Office Action. Claims 23-35 and 37-59 remain pending in this application.

Claims 23-35 and 37-59 were rejected under 35 U.S.C. §112, first paragraph, for the reasons set forth in paragraph (1) of the Office Action. Claims 48 and 49 were rejected under 35 U.S.C. §112, first paragraph, for the reasons outlined in paragraphs (2) and (3) of the Official Action. Claims 23-35 and 37-59 were rejected under 35 U.S.C. §112, second paragraph, for the reasons discussed in paragraph (4) of the Action. Withdrawal of these rejections is respectfully requested for at least the following remarks.

Concerning the issues raised in paragraph (1) of the Final Rejection, Applicant respectfully submits that the specification, when viewed as a whole, fully supports the previous amendment to claim 1 that "Iso" represents a residue containing at least two isocyanate functions after reaction of at least one isocyanate function. The starting polyisocyanate contains at least three isocyanate functions. In addition to those portions of the specification previously noted (page 8, lines 4-5 and Example 7 on page 29 where the starting polyisocyanate includes HDI trimer), Applicant also directs attention to page 29, lines 6-8 which discloses polyisocyanate trimer oligomers containing heavy fractions consisting of "more than three cyclocondensed HDI claims" and page 31, lines 1-3 which discloses that Tolonate HDT contains tris-trimer and tetramers all of which are polyisocyanates which contain at least three isocyanate groups. Note also polyisocyanate

trimers containing an isocyanurate group (page 8, lines 9-11) and the triisocyanate disclosed on page 10, last two lines.

Since the starting polyisocyanates may contain at least three isocyanate functions and only one function need be converted, it necessarily follows that the "Iso" residue contains at least two unreacted isocyanate functions. In view of the above comments, Applicant respectfully submits that the specification is sufficient to fully apprise those of ordinary skill in the art that Applicant was in possession of the claimed invention when the present application was filed.

Concerning the objection to claim 34, (Applicant believes the Examiner was actually referring to claims 30 and 31 which contain the words "vicinal hydroxyl compound"), reconsideration is requested. The original terminology, "vicinal diol", was objected to by the Examiner in the Office Action mailed April 5, 2005 because glycerol and 1, 9, 10-trihydroxyoctadecane were not diols. The clear intent of the present disclosure was to encompass those compounds containing vicinal (i.e. adjacent or adjoining) hydroxyl groups which react with activated carbonylating agents to form cyclic carbonates. The term "vicinal" as applied specifically to hydroxyl groups is defined on page 1214 of Hawley's Condensed Chemical Dictionary, 12th Ed. (copy attached). The term "vicinal diol" set forth on page 15, line 17 of the specification, coupled with specific examples of suitable compounds containing two or three hydroxyl groups would clearly suggest to those of ordinary skill that Applicant was in possession of the invention defined in claim 30, i.e., vicinal hydroxyl compounds which react with activated carbonylating compounds to form cyclic carbonates.

Turning to the rejection of claims 48 and 49 set forth in paragraphs (2) and (3) of the Final Rejection, Applicant submits the following remarks. Claims 48 and 49 have been

amended to specify that the reactant comprises a polyisocyanate having at least three isocyanate functions and optionally, a compound having at least one carbonate, urea, biuret, uretidinedione, isocyanurate, urethane or allophanate group. Support for these amendments may be found on page 17, lines 1-29 of the specification. Thus, the reactant maybe a polyisocyanate having at least three isocyanate functions used alone or in admixture with compounds having the groups enumerated above and in claims 48 and 49. Of course, the polyisocyanate having at least three isocyanate functions may also contain other functional groups as set forth on page 8 of the specification.

Applicant respectfully submits that the present disclosure clearly supports the position that "isocyanate function" encompasses masked isocyanate groups. This is evident from the disclosure on page 15, lines 6-9 of the specification which indicates that the isocyanates may be reacted with masking agents before reaction with the compound providing cross-linking groups.

The terminology "hydrocarbon-based chain" is defined on page 5 of the specification. It is a chain composed primarily of carbon and hydrogen optionally modified as set forth therein. Applicant submits that the language is not indefinite.

Claim 43 has been amended for purposes of clarification in view of the Examiner's comment. Claim 44 has been amended to indicate that the polyisocyanate reactant is a mixture which includes dimers as in Example 7.

In view of the above, the §112, first and second paragraph, rejections have been obviated and should be withdrawn.

Claims 23-28, 30, 31, 33-35, 37, 42-46, 48 and 50-59 were rejected under 35 U.S.C. §102(a) as being anticipated by WO 00/55263 for the reasons given in paragraph (6) of the Official Action. Claims 39, 47 and 49 were rejected under 35 U.S.C. §103(a) as being

obvious over WO 00/55263 for the reasons set forth in paragraph (7) of the Action. Claims 23-27, 30, 31, 33-35, 42, 45, 47, 48, 50, 55, 56 and 59 were rejected under 35 U.S.C. §102(b) as being anticipated by EP 0,419,114 for the reasons given in paragraph (9) of the Office Action. Reconsideration and withdrawal of these rejections are respectfully requested for at least the reasons which follow.

Applicant submits herewith a certified English translation of International Application No. PCT/FR99/02350, as well as an English text of International Application No. PCT/FR99/02350 with underlined portions indicating the differences between the text in the International Application and that of the continuation-in-part (CIP) application filed in the United States. The comparison of these two documents clearly establishes that the CIP application does not contain any new matter added vis-à-vis the International Application. Therefore, all claims of the present application are fully supported by the disclosure of the International Application. In view thereof, WO 00/55263 cannot be considered as prior art against the present application.

EP '114 does not disclose a stable reaction product of a polyisocyanate and a cyclic carbonate but, rather, only discloses a process in which a polyisocyanate reacts with a cyclic carbonate to yield a foam by virtue of the formation of gaseous carbon dioxide (CO₂) formed by the decomposition of the cyclic carbonate. More precisely, EP '114, at page 2, lines 18-20, discloses that the aim of the invention is the production of polymeric foams and refers to Tsuzuki et al., J. Org. Chem., 25 (1960), 1009, a copy of which is attached hereto for the convenience of the Examiner. Accordingly, the reaction products disclosed in EP '114 are polymeric foams which do not contain carbonate groups.

To the contrary, the compounds of the present invention do contain cyclic carbonate groups, as evidenced by infrared and NMR analyses (*see* Examples 4, 7, 8, 9 and 10). It is

also noteworthy that none of the Examples of the present application make use of any catalyst similar to those used in either EP '114 or Tsuzuki et al that could have led to the reaction as disclosed by Tsuzuki et al and used in EP '114 in forming gaseous carbon dioxide. Therefore, the products of the present invention are necessarily different from those disclosed in EP '114.

For at least these reasons, the §102(a) and (b) and §103(a) rejections should be reconsidered and withdrawn. Such action is earnestly solicited.

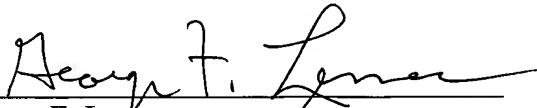
From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at (703) 838-6683 at his earliest convenience.

Respectfully submitted,

BUCHANAN INGERSOLL PC

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By: _____


George F. Lesmes
Registration No. 19,995

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620